19. The apparatus of claim 16 wherein the timing error detector is adapted to estimate or interpolate the intersymbol sample based upon a plurality of samples.

20. An apparatus comprising:

an analog-to-digital (A/D) converter to convert an analog signal to a digital signal;

at least one mixer coupled to the to A/D converter provide digital data signals; and

a timing error detector to detect an amount of timing error for symbol sampling, the timing error detector adapted to detect an amount of timing error based upon the difference between a value of an intersymbol sample and an average of a plurality of symbol samples.

21. The apparatus of claim 20 wherein the timing error detector is adapted to detect an amount of timing error based upon the difference between an average of the values for first and second symbol samples and a value of an intersymbol sample taken between the first and second symbol samples.

22. The apparatus of claim 20 wherein the apparatus comprises a quadrature demodulator, the at least one mixer comprising two mixers to provide in-phase (I) and out-of-phase (Q) signals.

23. The demodulator of claim 22 wherein the timing error detector is adapted to detect an amount of timing error for both I and Q signals, the total timing error being based on the timing error for both I and Q signals.

24. The apparatus of claim 20 wherein the apparatus is adapted to apply a correction to the timing of symbol sampling if the amount of timing error exceeds a threshold.

25. The demodulator of claim 23 wherein the demodulator is adapted to apply a correction to the timing of symbol sampling if the sum of the amount of timing errors for I and Q signals exceeds a threshold.

26. A demodulator comprising:

an analog-to-digital (A/D) converter to convert an analog signal to a digital signal;

at least one mixer coupled to the to A/D converter provide digital data signals;

an equalizer coupled to an output of the at least one mixer;

a timing error detector to detect an amount of timing error for symbol sampling, the timing error detector adapted to detect an amount of timing error based upon the difference between:

a value of an intersymbol sample; and

an average of first and second symbol samples, the intersymbol sample taken between the first and second symbol samples; and

an averaging circuit coupled to the timing error detector to average a plurality of detected timing errors.

27. A demodulator of claim 26 wherein at least a portion of the demodulator is operable in two modes:

wherein in a first mode the timing error detector to detect an amount of timing error by using measured values for symbol samples and a measured value for the intersymbol sample; and

wherein in a second mode the timing error detector to detect an amount of timing error by using actual values for symbol samples and a measured value for the intersymbol sample.

28. The demodulator of claim 27 wherein the first mode comprises an acquisition mode, and the second mode comprises a tracking mode.

29. A communication system comprising:

a transceiver, the transceiver including a timing error detector, the timing error detector adapted to detect an amount of timing error based upon the difference between a value of an intersymbol sample and an average of first and second symbol samples;

a processor coupled to the transceiver;

a memory coupled to the processor.

30. The system of claim 29 and further comprising an antenna coupled to the transceiver.

31. The system of claim 29 wherein the memory comprises flash memory.

32. A method comprising:

detecting a timing error for symbol sampling based upon a value of an intersymbol sample as compared to an average of a plurality of other samples.

33. The method of claim 32 wherein the detecting comprises detecting an amount of timing error based upon a value of an intersymbol sample minus an average of a plurality of symbol samples, the intersymbol sample taken between at least two of the plurality of symbol samples.

34. The method of claim 32 wherein the detecting comprises detecting an amount of timing error based upon a value of an intersymbol sample minus an average of the values for first and second symbol samples, the intersymbol sample taken between the first and second symbol samples.

35. The method of claim 34 wherein the first symbol sample is a sample of a first symbol, and the second symbol sample is of a second symbol, the first and second symbols being consecutive or successive symbols, and the intersymbol sample being a sample taken between the first and second symbol samples.

36. The method of claim 32 wherein the value of the intersymbol sample is interpolated or estimated based on one or more other sample values.

37. The method of claim 32 wherein the value of the intersymbol sample is measured at a sampling point approximately mid-way between the first and second symbol samples.

38. The method of claim 32 wherein the amount of timing error is to be sign normalized based on the sign of the value of one of the symbol samples.

39. The method of claim 32 and further comprising adjusting the timing of symbol sampling based on the amount of error.

40. The method of claim 32 and further comprising:

determining whether the amount of error exceeds a threshold; and

adjusting the timing of symbol sampling based on the amount of error, if the amount of error exceeds the threshold.

41. A method comprising:

detecting a timing error for symbol sampling based upon a value of an intersymbol sample as compared to an average of first and second symbol samples, the first and second symbol samples being taken from first and second consecutive symbols, respectively, and the intersymbol sample being approximately mid-way between the first and second symbol samples.

42. The method of claim 41 and further comprising:

averaging the amount of timing error over a period of time or over a number of symbols;

determining whether the average error exceeds a threshold; and

adjusting the timing of symbol sampling based on the amount of error, if the amount of error exceeds the threshold.

43. The method of claim 41 wherein the value of the intersymbol sample is interpolated or estimated based on one or more other sample values.